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## Patent claims

1. A method for measuring intercell interference (II) in a frequency channel (FK) in a radio communication system,  
in which

information separated using spreading codes (sk) is transmitted simultaneously to a plurality of subscriber stations (MS1, MS2, MS3) in the frequency channel (FK),  
a total received power (gep) is measured in the frequency channel (FK) by a first subscriber station (MS1),

a sum of transmitted powers (sks1 to sksn) for the spreading codes (sk) used by a first base station (BS1) is determined in the frequency channel (FK), and  
the intercell interference (II) is determined from a difference between the total received power (gep) and the sum of the transmitted powers (sks1 to sksn).

2. The method as claimed in claim 1, in which  
a measurement result for the total received power (gep) is signalled to a network device (BS1, RNC), and  
the intercell interference (II) is determined in the network device (BS1, RNC).

3. The method as claimed in one of the preceding claims, in which

*sub a!*  
~~the transmitted powers (sks1 to sksn) are corrected by subtracting a path loss (pv) between the first base station (BS1) and the first subscriber station (MS1).~~

4. The method as claimed in claim 3, in which  
the path loss (PV) is signaled to a network device (RNC).

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5. The method as claimed in one of claims 3 or 4, in which

*sub a2* the first subscriber station (MS1) measures a received power (epi) on a pilot channel (CCPCH) associated with the first base station (BS1), and

the path loss (pv) is determined from the difference between transmitted power (spi) on the pilot channel (CCPCH) and the received power (epi).

6. The method as claimed in claim 5, in which the measurement result for the received power (epi) is signaled to a network device (BS1,RNC).

7. The method as claimed in one of the preceding claims, in which

*sub a3* the measurement of the total received power (gep) and the determination of the transmitted powers (sksl to sksn) take place at the same time.

8. The method as claimed in one of the preceding claims, in which

the measurements are performed within one time interval (ts).

9. The method as claimed in claim 8, in which the time interval (ts) is at least part of a time slot (ts) in a TDMA system.

10. The method as claimed in one of claims 8 or 9, in which

*sub a3* a pilot channel (CCPCH) is transmitted during the time interval (ts), and

the measurement result for the total received power (gep) is reduced, by subtraction, by the measurement result for the received power (epi) on the pilot channel (CCPCH).

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11. The method as claimed in one of the preceding claims, in which the intercell interference (II) is measured cyclically.

12. The method as claimed in one of the preceding claims, in which measurement of the intercell interference (II) is controlled by a network device (BS1, RNC).

13. The method as claimed in one of claims 1 to 11, in which measurement of the intercell interference (II) is controlled by the first subscriber station (MS1).

14. The method as claimed in one of claims 12 or 13, in which measurement is controlled if a parameter (BER) relating to the reception quality of the information falls below a threshold value.

sub-a 3  
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